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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/846,899	05/01/2001	Melanie Russell	FOM-117.01	4640

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EXAMINER	
WACHSMAN, HAL D	
ART UNIT	**PAPER NUMBER**
2857	

DATE MAILED: 01/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/846,899	RUSSELL ET AL.	
	Examiner	Art Unit	
	Hal D Wachsman	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 November 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) *8-28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 November 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

1. The corrected drawings filed 11-7-03 are objected to for the reasons stated on the attached PTO-948 form. Appropriate correction is required.

2. All of the specification amendments made in the reply filed 11-7-03 are objected to under 37 C.F.R. 1.52 because there is insufficient spacing between the lines. Appropriate correction is required.

3. The labeled "(Currently amended)" claim 7 submitted in the reply filed 11-7-03 is objected to under 37 C.F.R. 1.121 because no amendments were made to this claim however the claim as been indicated as being currently amended. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's Admissions of the prior art in view of Beaverstock et al. (5, 134,574).

As per claim 1, the Applicant's Admissions of the prior art (figure 1, page 1 Lines 11-15, page 8, lines 19-23, page 9, lines 16-23) disclose "computing clinker production at the kiln output". The Applicant's Admissions of the prior art (figure 1, page 1, lines 12-22, page 8, lines 19-23, page 9, lines 16-23) disclose "computing the cost of clinker based on the computed clinker production". With respect to the displaying step, the above cited sections of the Applicant's Admissions disclose this step with the exception of explicitly disclosing that at least one of the clinker production and the cost of clinker as a function of time is being displayed. However, Beaverstock et al. (Abstract, col. 4 lines 1-4, 24-26, col. 10 lines 11-14) teach the displaying of production and the cost of the product being produced as a function of time in a process plant and thus would be of use in the monitoring of a cement production process. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Beaverstock et al. to the Applicant's Admissions of the prior art because as taught by Beaverstock et al. (col. 4 lines 11-20) such dynamic performance measurements are not only more accurate than prior art financial based performance measurements by being based on in-process information instead of post-process quantity of product made, but are also more useful to operations personnel by

being provided/displayed in a timely (real time) manner which enables operations personnel to readily make necessary adjustments to increase performance of current plant operations.

As per claim 5, the Applicant's Admissions of the prior art (figure 1, page 9, lines 4-16 of the specification) disclose the coal being fed into a kiln but does not explicitly disclose the measurment of the feed rate of the kiln coal. However, Beaverstock et al. (col. 4 lines 46-49, col. 5 lines 22-25) teach that controllable aspects of the process include flow volume and flow rate and that there are sensors to detect volume, weight, flow volume, flow rate as well as other desired physical and/or chemical aspects of the process. Therefore, Beaverstock et al. clearly teaches the capability to measure the feed rate of whatever may be desired in a process plant. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the teachings of Beaverstock et al. to the Applicant's Admissions of the prior art as specified above because knowing the feed rate of the fuel being used, such as coal, would be important in then determining from that how much fuel is being used to make the clinker and to factor in the cost of that fuel.

As per claim 7, with respect to the deriving step, the computation of clinker production and the cost of clinker has already been addressed in claim 1 above. It appears that the Applicant's Admissions of the prior art does not clearly disclose the comparing the derived measure to a threshold and generating an alarm steps. However, Beaverstock et al. (figure 7 – blocks 92 and 93, col. 16 lines 4-12) teach the comparing step and Beaverstock et al. (Abstract – block 76, col. 14 lines 19-36) teach the

generating an alarm step. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Beaverstock et al. to the Applicant's Admissions of the prior art because as taught by Beaverstock et al. (col. 4 lines 11-20) such dynamic performance measurements are not only more accurate than prior art financial based performance measurements by being based on in-process information instead of post-process quantity of product made, but are also more useful to operations personnel by being provided/displayed in a timely (real time) manner which enables operations personnel to readily make necessary adjustments to increase performance of current plant operations.

6. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's Admissions of the prior art in view of Beaverstock et al. (5,134,574) as applied to claim 1 above, and further in view of Hansen et al. (5,569,030).

As per claim 2, Hansen et al. (col. 2 lines 12-15, 19, 20) teach that on the Average about 7-10% (but as high as about 17%) of the raw material feed on a dry basis is blown back from the drying zone as dust and that high dust loss means loss of efficiency of raw materials. Hansen et al. (col. 3 lines 65-67, col. 8 lines 43-47) further teach that reduced dust loss allows an associated reduction in the amount of raw material for the same amount of clinker production and that reduced dust loss enhances the efficiency of cement clinker production not only by decreasing the raw material/clinker production ratio but concomitantly allows for enhanced energy/fuel efficiency. Consequently, from the above, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to measure the feed to the

kiln and the dust being lost taking a difference between the two, because it would provide what is the actual effective feed that is being received for making clinkers for use in productivity determinations and determining the efficiency of the system. In addition, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Hansen et al. to the Applicant's Admissions of the prior art and the invention of Beaverstock et al. as specified above because as taught by Hansen et al. (col. 2 lines 18-22) high dust loss not only means loss of efficiency of use of raw materials but it also requires greater capital investment in dust collection equipment and loss of energy efficiency.

As per claim 3, the Applicant" Admissions of the prior art (figure 1, page 8 lines 10-20 of the specification) disclose raw meal input to a kiln with the exception of explicitly disclosing that this raw meal input is being measured. However, Beaverstock et al. (col. 4 lines 46-49, col. 5 lines 22-25) teach that controllable aspects of the process include flow volume and flow rate and that there are sensors to detect volume, weight, flow volume, flow rate as well as other desired physical and/or chemical aspects of the process. Therefore, Beaverstock et al. clearly teaches the capability to measure the feed rate of whatever may be desired in a process plant. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the teachings of Beaverstock et al. to the Applicant's Admissions of the prior art and Hansen et al. as specified above because knowing the raw meal input into the kiln would be important in then determining from that how much raw meal input is being used to make the clinker and to factor in the cost of that raw meal input.

As per claim 4, the Applicant" Admissions of the prior art (figure 1, page 8 lines 12-20 of the specification) disclose slurry input to a kiln with the exception of explicitly disclosing that this raw slurry input is being measured. However, Beaverstock et al. (col. 4 lines 46-49, col. 5 lines 22-25) teach that controllable aspects of the process include flow volume and flow rate and that there are sensors to detect volume, weight, flow volume, flow rate as well as other desired physical and/or chemical aspects of the process. Therefore, Beaverstock et al. clearly teaches the capability to measure the feed rate of whatever may be desired in a process plant. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the teachings of Beaverstock et al. to the Applicant's Admissions of the prior art and Hansen et al. as specified above because knowing the feed rate of the slurry be would be important in then determining from that how much slurry is being used to make the clinker and to factor in the cost of that slurry in clinker production.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's Admissions of the prior art in view of Beaverstock et al. (5,134,574) as applied to claim 1 above, and further in view of Taulbee (2002/0050094).

As per claim 6, Taulbee (page 1, paragraph 0007) teaches the computation of a credit based on waste fuel. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Taulbee to the Applicant's Admissions of the prior art and the invention of Beaverstock et al. as specified above because as taught by Taulbee (page 1 paragraphs 0003,

0007) it would provide incentives to encourage the cleanup of fugitive coal fines which represent an environmental hazard as well as an expensive disposal problem.

8. Applicant's arguments filed 11-7-03 have been fully considered but they are not persuasive. On page 13 of the reply the Applicant argues that "At most, Applicant's Admissions teach only computing the amount of product produced and the cost of the amount of product produced for the cement production process of Fig. 1." However, the Applicant's Admissions of the prior art, as shown on page 1, lines 11-19 of the specification states:

"In a process plant, various processes are employed to produce amounts of a desired product. Traditional methods to measure general performance of manufacturing operations of a certain product include counting the amount of product produced over a certain period of time, and from that amount, calculating a cost per unit product. The cost per unit product is typically based on a standard cost function that is associated with operation, often developed at the beginning of a fiscal time period, and utilized throughout that period."

The Examiner respectfully notes that Webster's II New Riverside University Dictionary defines product as something produced by human or mechanical effort or by a natural process. Consequently, based upon the above definition the clinker produced in the cement production process is indeed such a product as stated in the Applicant's Admissions of the prior art shown above.

On page 13 of the reply the Applicant further argues "Applicant's Admissions do not contain any teaching directed toward computing the amount of an intermediate

produced or the cost of the amount of the intermediate produced....". However, with respect to the underlined above, the Applicant is arguing unclaimed merits or distinctions. With respect to Beaverstock et al. on this same page the Applicant argues that "....Beaverstock does not contain any teaching directed to computing clinker produced at a kiln output and the cost of clinker produced at the kiln output in a cement production process". However, as shown in paragraph 8 of the previous Office Action Beaverstock was not used to teach the features being argued above but rather to teach the displaying aspect. The Examiner also respectfully notes that no arguments were provided (see 37 C.F.R. 1.111) with respect to the Hansen et al. reference used in the 35 U.S.C. 103 rejections of claims 2-4 and the Taulbee reference used in the 35 U.S.C. 103 rejection of claim 6.

9. No claims are allowed.

10. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. This application contains claims 8-28 drawn to an invention nonelected with traverse in Paper No. 4. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal D Wachsman whose telephone number is 703-305-9788. The examiner can normally be reached on Monday to Friday 7:00 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 703-308-1677. The fax phone numbers for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Hal D Wachsman
Primary Examiner
Art Unit 2857

HW
January 13, 2004